



## CITY OF NEWTON ENGINEERING DIVISION

Check List  
Minimum Requirements  
*August 6, 2004*

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### Drainage:

- An on-site soil evaluation needs to be performed by a Registered Professional Engineer and Certified Soil Evaluator to obtain the seasonal high groundwater elevation, percolation rate in accordance to Title V. The soil log or report must be submitted with the plans. The proposed drainage system shall be designed and located within (20') of the test pit. The proposed drainage system should be 2' above the seasonal high groundwater elevation in accordance to the Department of Environmental Protection.
- A drainage analysis needs to be performed based on the City of Newton's 100-year storm event of 8.37-inches over a 24-hour period. All runoff from all new impervious areas need to be infiltrated on site, for the proposed development. A detail report & maps are required that identifies all subcatchment areas, control points, (soil logs) test pit and percolation test locations, the analysis must be for pre and post construction. There shall be no increase of volume or flow rate to any abutting property public or private.
- The runoff from driveways, parking lots needs to be captured on site via catch basin(s) or trench drain(s) both of which will require a 4' sump and Neenah R-3705 gas trap outlet, then be connected to an on site leaching system.
- Runoff from roofs is considered to be "*clean*" and may be collected via gutters and connected directly to the on site infiltration system.
- Infiltration systems need to specify "**crushed washed stone**", thickness of the stone around and beneath the units. The elevation of the bottom of the stone, bottom of the unit/structure, and depth to groundwater table need to be labeled. The infiltration system is required to be covered with a layer of filter fabric plus a 3" layer of peastone on top of the system, and then covered over with filter fabric.

### Easements:

- Any existing easements that transverse the property must be clearly identified, and copy of the deed from the Middlesex Registry of Deeds shall submitted.

### Pedestrian Access:

- All pedestrian access within the development and point of entry and egress shall conform to the Architectural Access Boards Regulations CMR 521 February 1, 2002 or most updated regulations, and the City of Newton's Design Standards.

### Water:

- Fire flow testing maybe required depending upon the scope of the project, and Fire Department requirements. Hydraulic calculations performed by a Massachusetts Professional Engineer shall be submitted to the fire Department for fire sprinkler systems.
- Minimum water service for domestic use to a single residential dwelling unit shall be 1" Type K copper.
- Water and sewer services shall be separated horizontally by a minimum of 10', if this separation cannot be achieved, then the sewer service shall be encased in Class B concrete. This is an EPA requirement.
- Fire suppression and domestic service shall be separate dedicated service connections with appropriate gate valves.
- Separate water services shall be required for multiple units.
- Accessory Building(s) may be supplied water from the main dwelling.
- Sub-metering is now available to landlords coordinate with the Utilities Division's Billing Office at City Hall.

#### **Sewer:**

- A detailed profile is needed which shows the existing water main, proposed water service(s), sewer main and proposed sewer service(s) with the slopes and inverts labeled to ensure that there are no conflicts between the sewer services and the water service. The minimum slope for a service is 2.0%, with a maximum of 10%. Pipe material shall be 6" diameter SDR 35 PVC pipe within 10' of the dwelling then 4" pipe per Massachusetts State Plumbing Code.
- The existing water & sewer services to the dwelling shall be cut and capped at the main and be completely removed from the site and properly back filled. The Engineering Division must inspect this work; failure to having this work inspected my result in the delay of issuance of the Utility Connection Permit.
- Accessory buildings shall have a separate sewer service to the main.
- All new buildings and homes shall have new sewer services. See Sewer Policy.

#### **Construction Management:**

- For large scale projects, the applicant will need to submit a Construction Management plan and or report that outlines: construction phasing, sequence, methods of operation, address site specific specialty issues, siltation, noise control methodology, impact as pertained to National Pollution Discharge Elimination System II (NPDES II) permit requirements.
- For large scale projects develop an Operations Manual for the long term maintenance of on site infrastructure including but not limited to: bi-annual sweeping of pavement areas, cleaning of catch basins, on site drainage (infiltration) systems, construction company employee parking, delivery of construction materials, etc.

### **Rock Blasting:**

Any site that requires rock blasting shall apply for a permit with the Fire Department.

### **General:**

The following notes shall be included on the site plan to be brought to the attention of the contractor regardless of the scale of the project:

1. *Utility work performed within a Public Street that has been paved or reconstructed within the past five (5) years will require the contractor to mill a minimum of 1-1/2" off the existing surface 2' on both sides of the trench(es) from curb line to curb line and be paved with Type I-1 Bituminous Concrete.*
2. The contractor is responsible for contacting the Engineering Division and scheduling an appointment 48 hours prior to the date when the utilities will be made available for an inspection of water services, sewer service, and drainage system installation. The utility in question shall be fully exposed for the inspector to view; backfilling shall only take place when the City's Inspector has given their approval.
3. The contractor will have to apply for Street Opening, Sidewalk Crossing, and Utilities Connecting permits with the Department of Public Works prior to any construction.
4. The applicant will have to apply for a Building permits with the Department of Inspectional Service prior to any construction.
5. Prior to Occupancy permit being issued, an As-Built Plan should be submitted to the Engineering Division in both digital format and in hard copy. The plan should show all utilities and final grades, any easements and final grading.
6. If a Certificate of Occupancy is requested prior to all site work being completed, the applicant will be required to provide a Certified Bank Check in the amount to cover the remaining work. The City Engineer shall determine the value of the uncompleted work.